



The diagram illustrates a system for surface shape recognition and biometric recognition. A curved surface, labeled 9, is shown at the top. Below it, a dashed box represents the **SURFACE SHAPE RECOGNITION SENSOR DEVICE**, labeled 10. This device contains several components: a light source 11A (represented by a downward-pointing triangle) and two pairs of sensors, 11B and 12A, and 12B and 11A. Wires connect these sensors to two processing units: a **SURFACE SHAPE DETECTION UNIT** (labeled 2) and a **BIOMETRIC RECOGNITION UNIT** (labeled 3). The detection unit outputs **2S** **SURFACE SHAPE DATA**, and the biometric unit outputs **3S** **RECOGNITION RESULT**.

FIG. 2

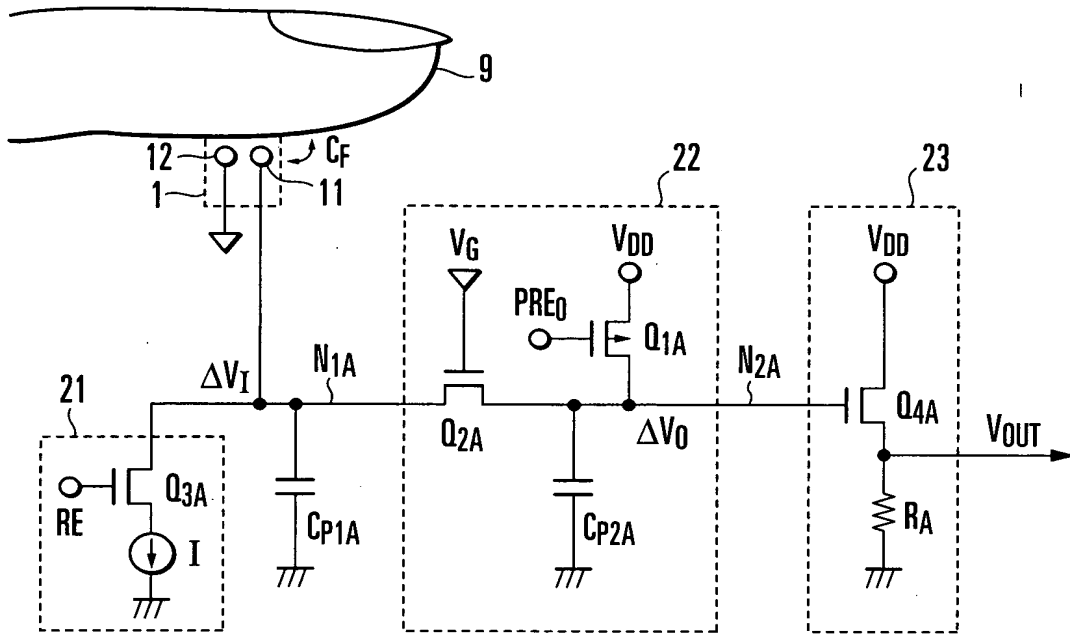


FIG. 3

FIG. 4A

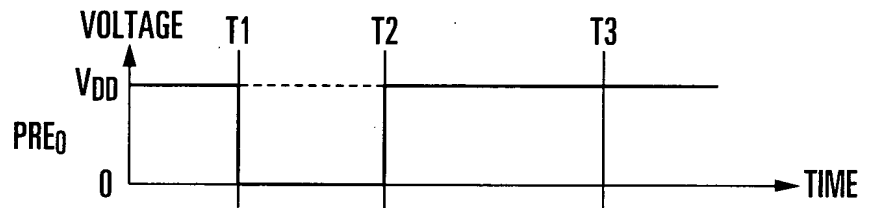


FIG. 4B

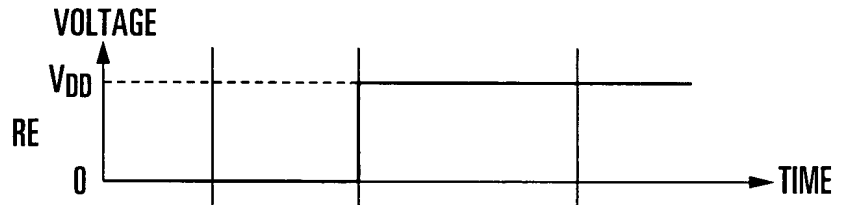
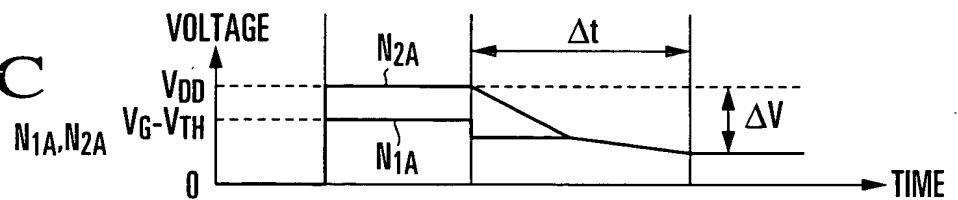


FIG. 4C



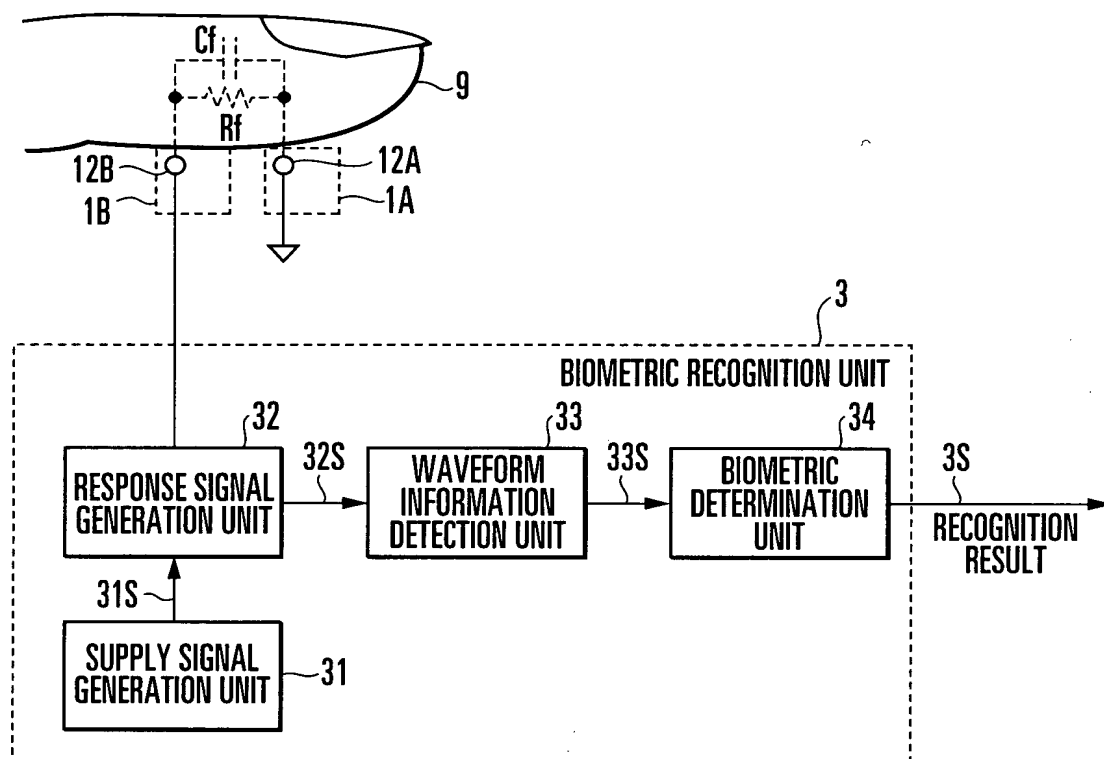


FIG. 5

FIG. 6A

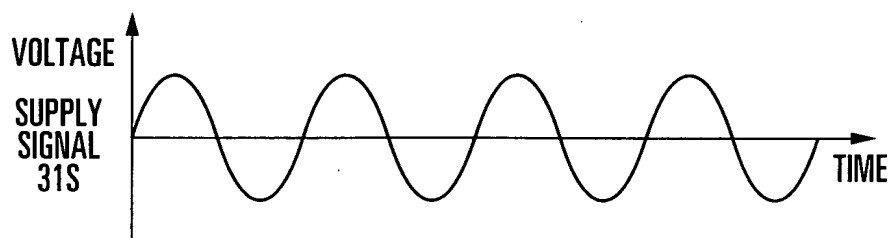


FIG. 6B

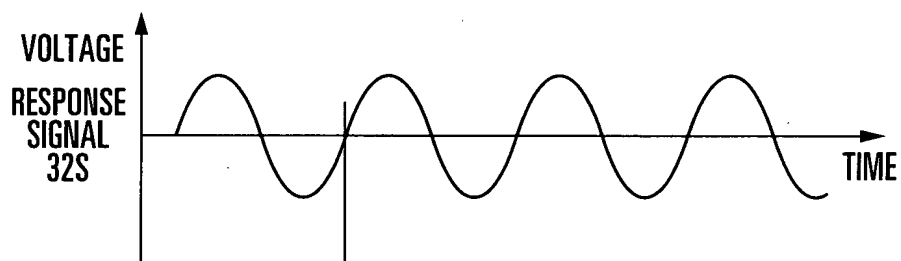


FIG. 6C

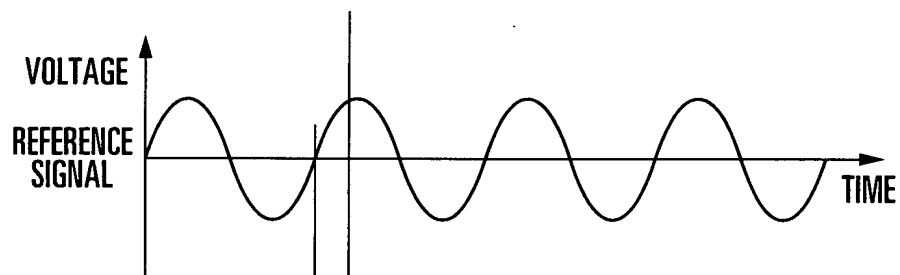
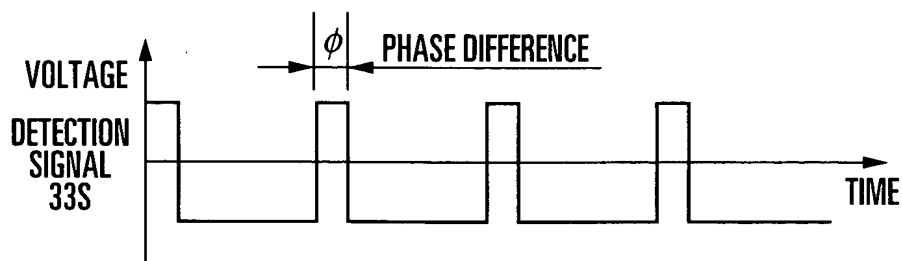
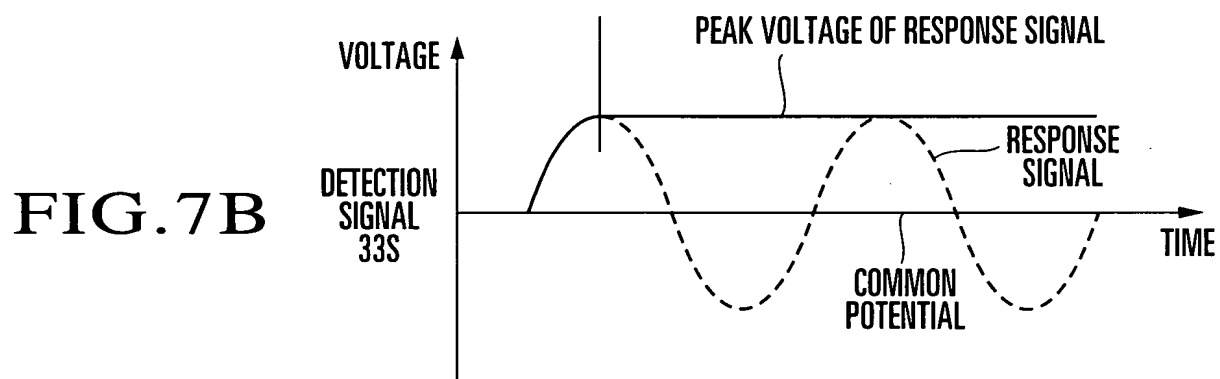
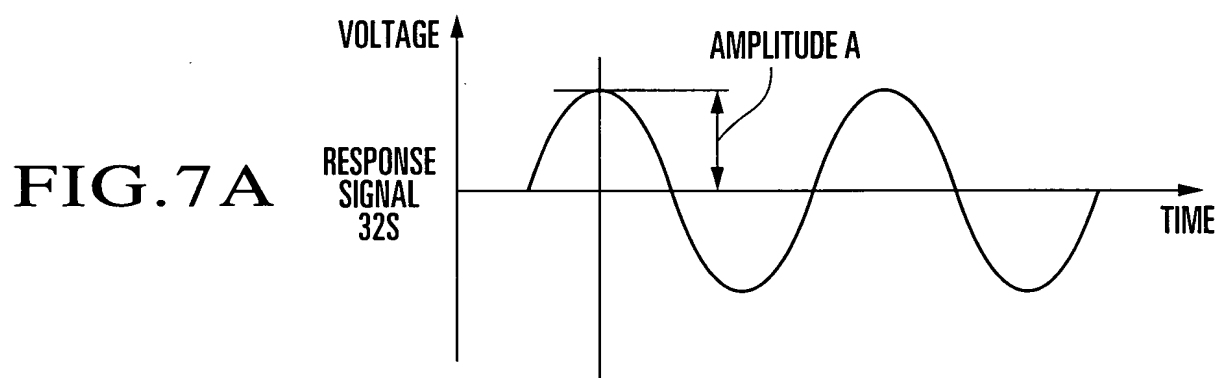


FIG. 6D





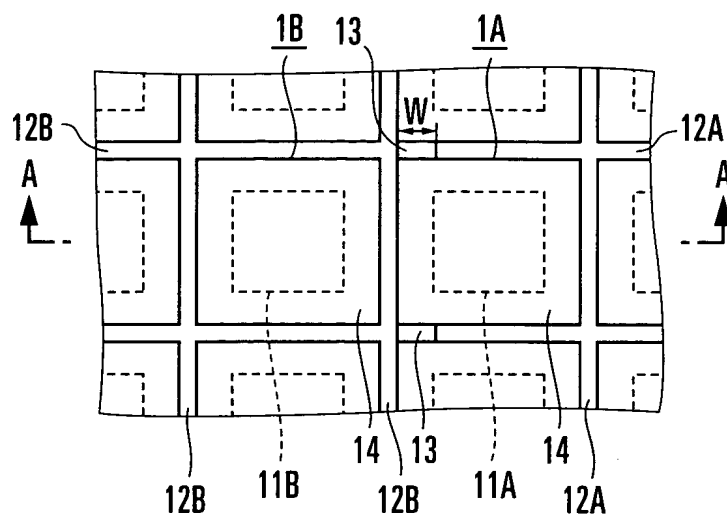


FIG. 8A

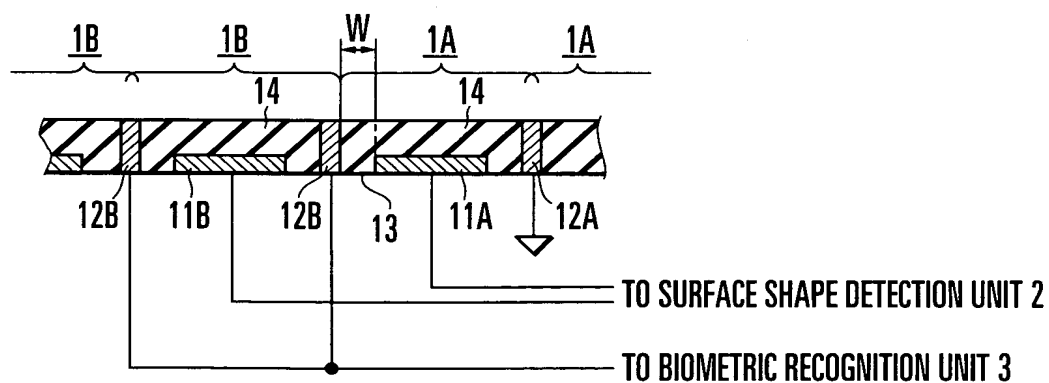


FIG. 8B

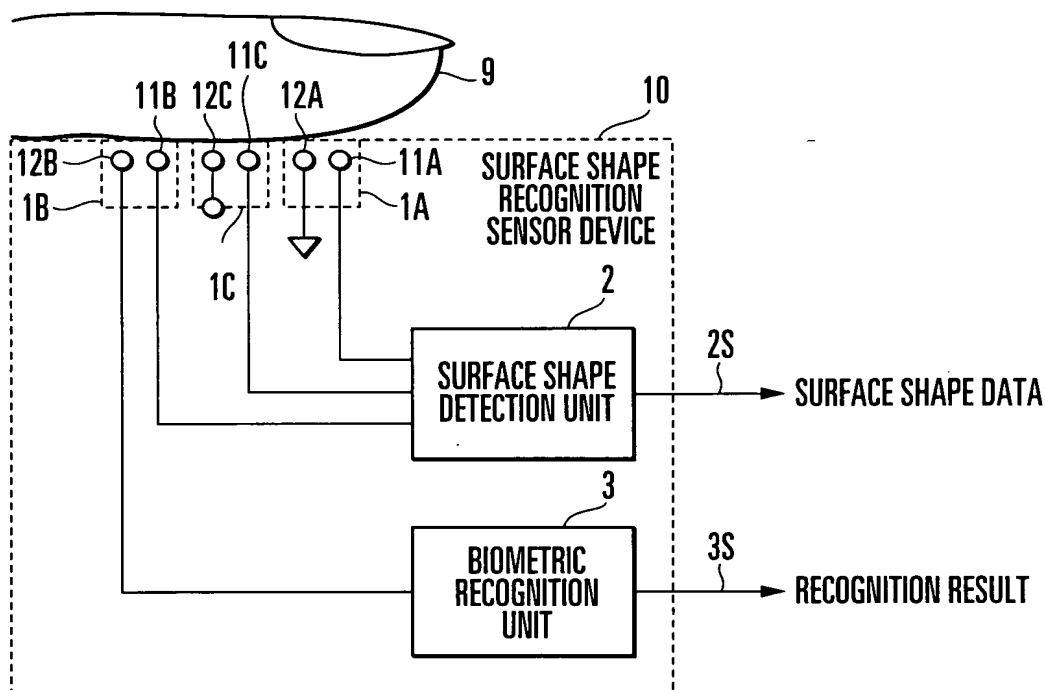


FIG. 9

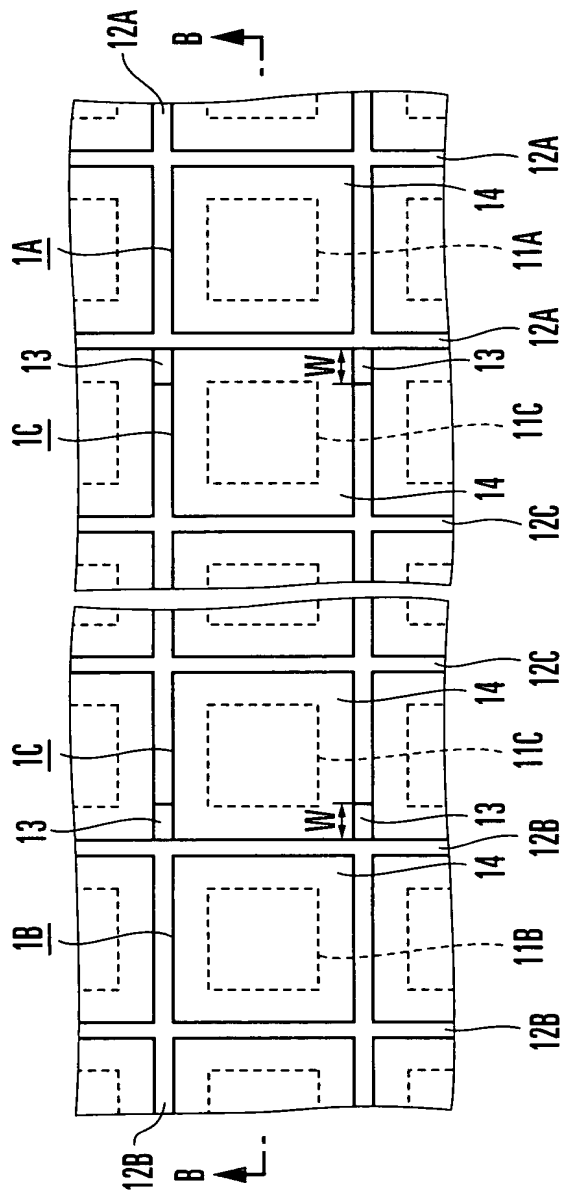


FIG. 10A

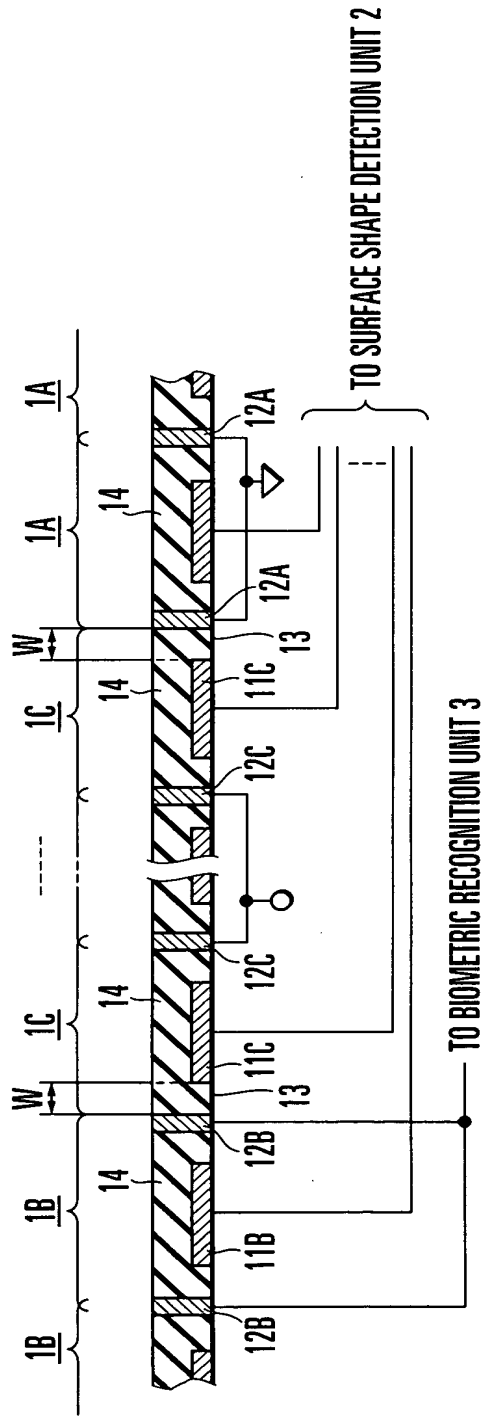


FIG. 10B

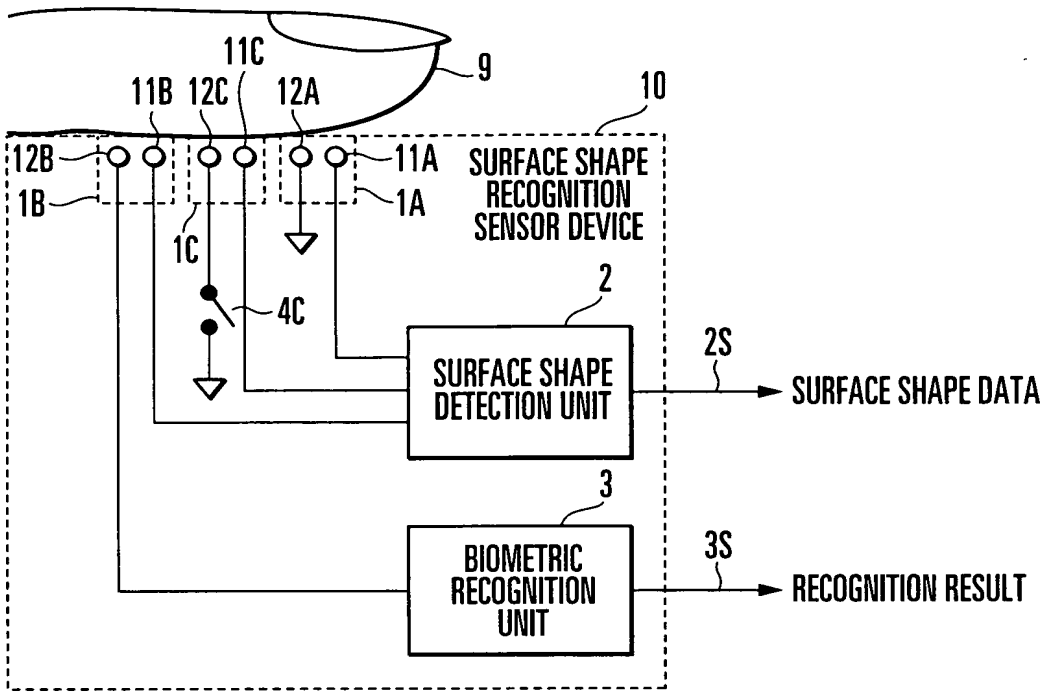


FIG. 11

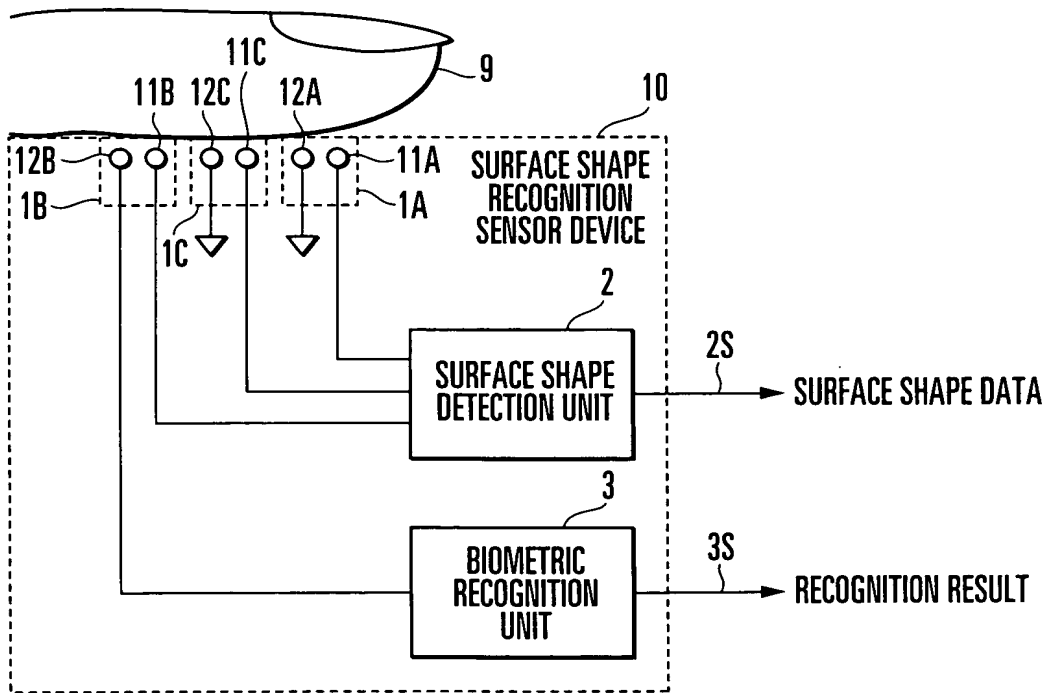


FIG. 12

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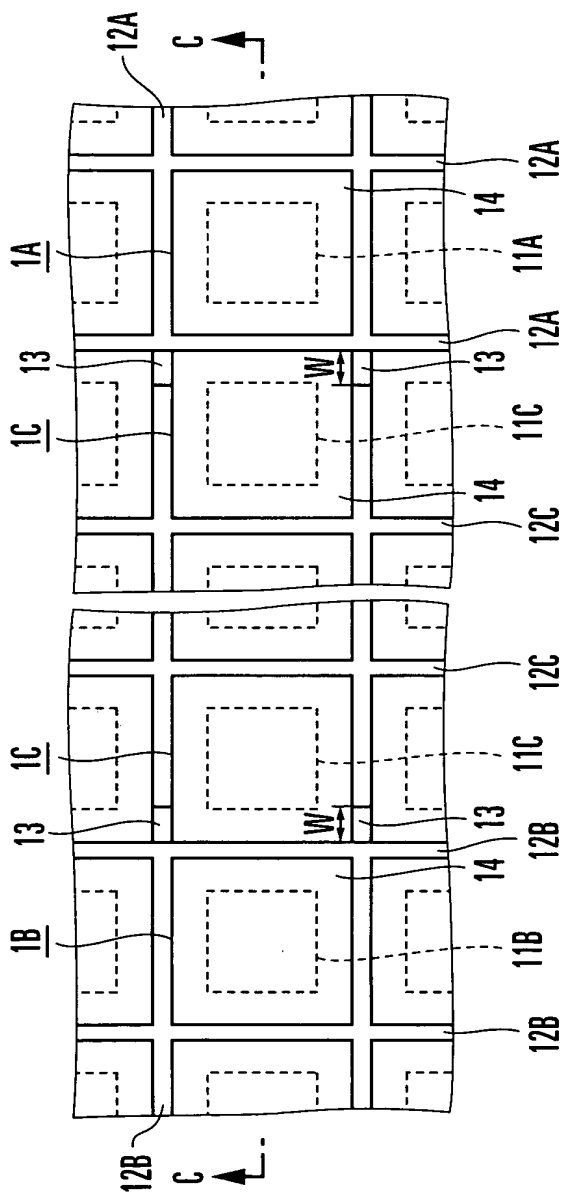


FIG. 13A



FIG. 13B

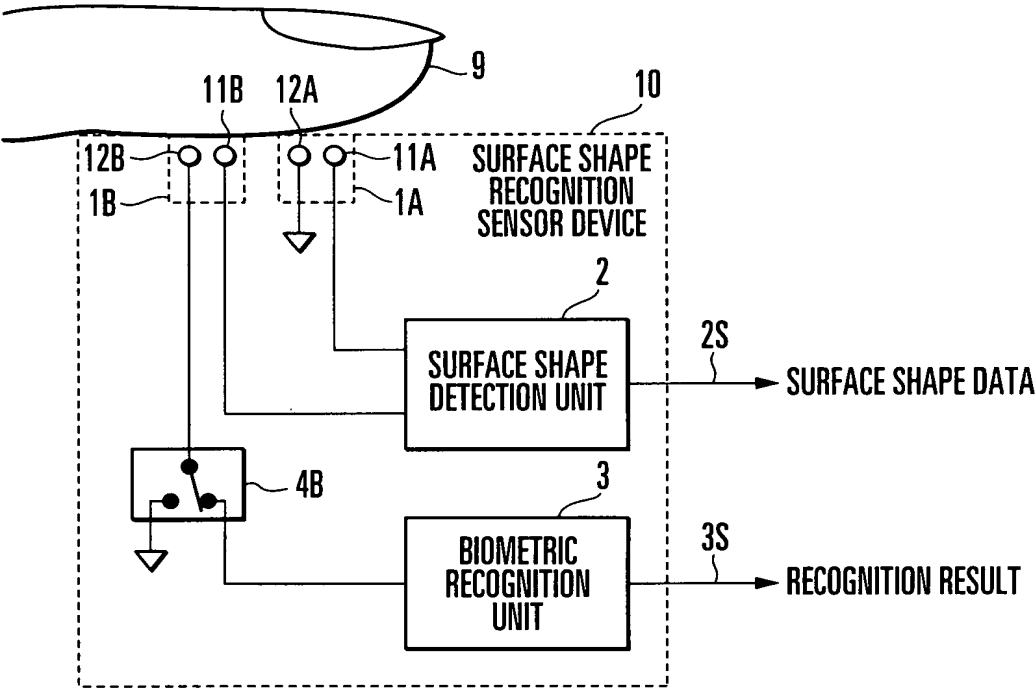


FIG. 14

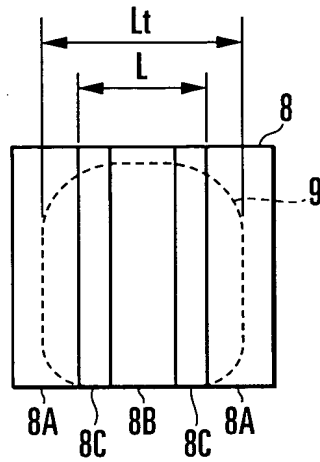


FIG. 15A

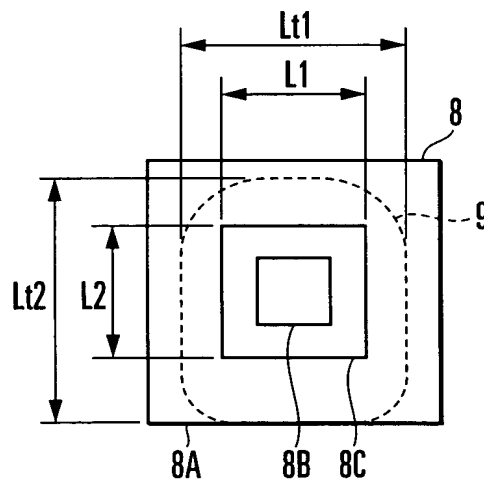


FIG. 15B

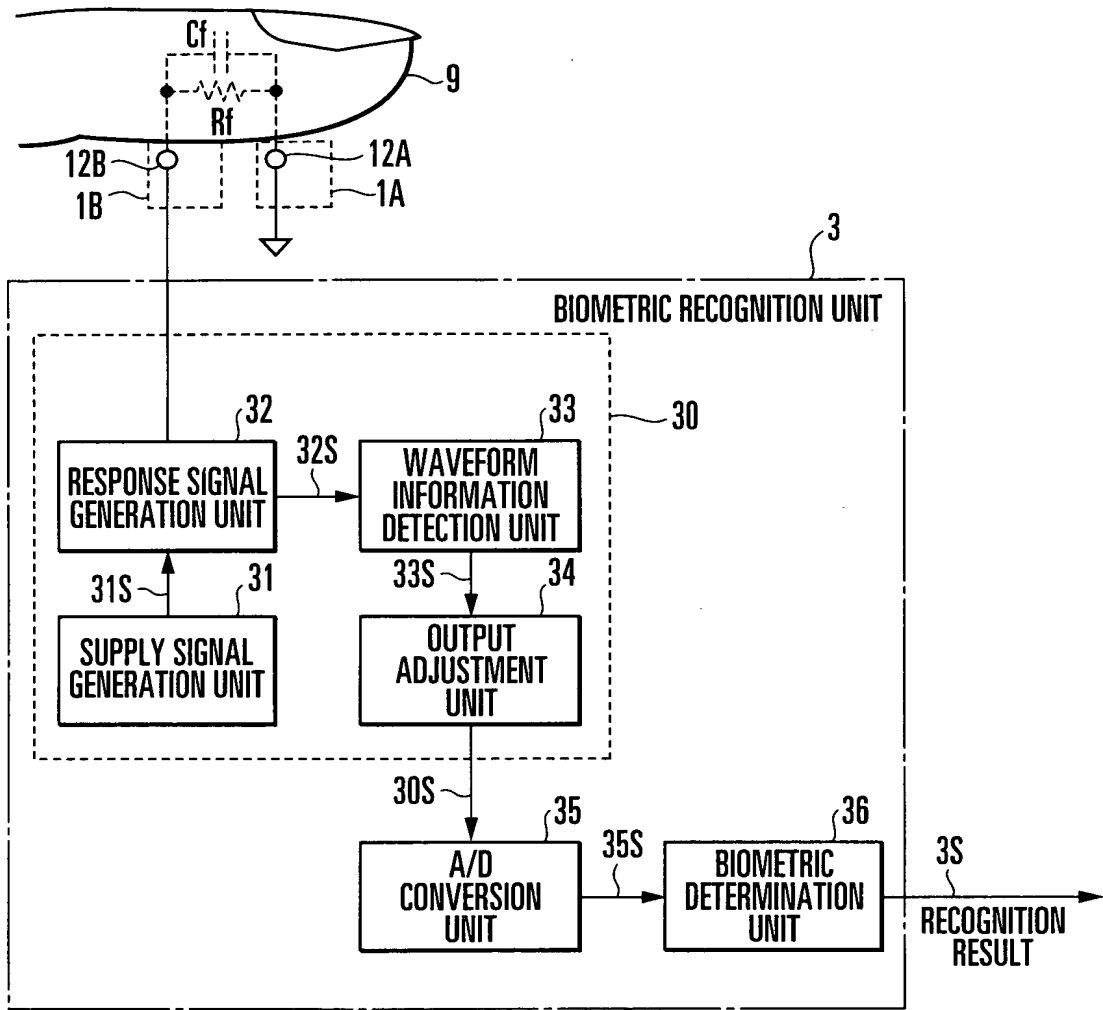


FIG. 16

FIG.17A

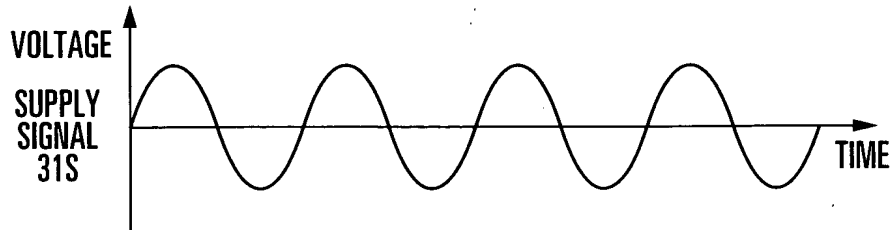


FIG.17B

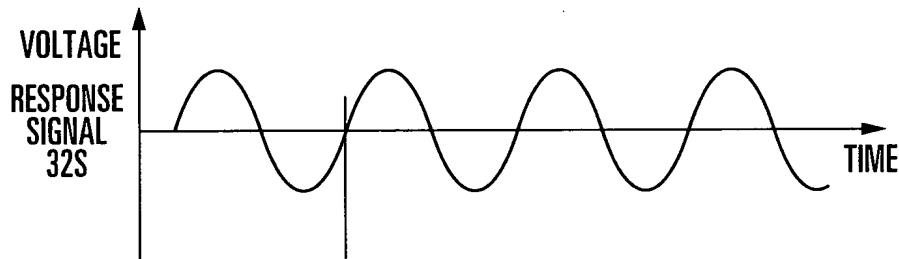


FIG.17C

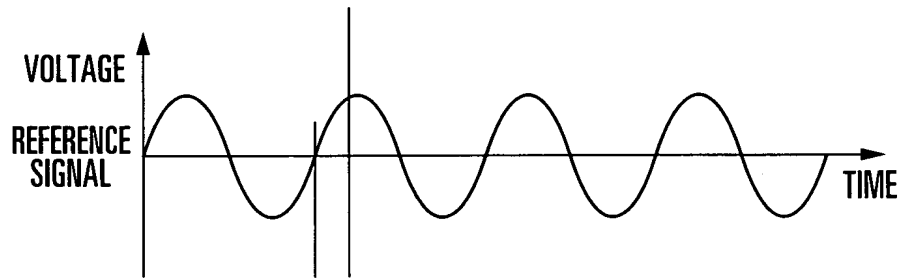


FIG.17D

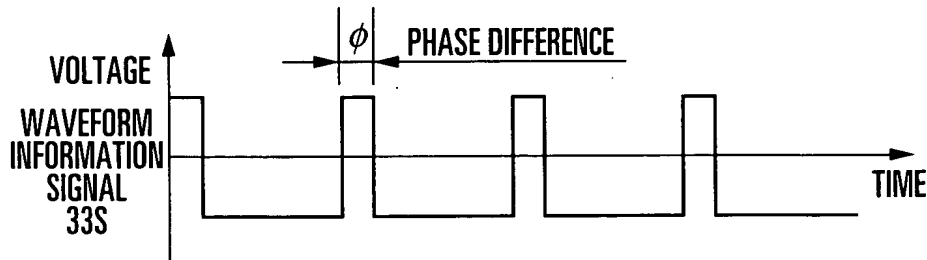


FIG.18A

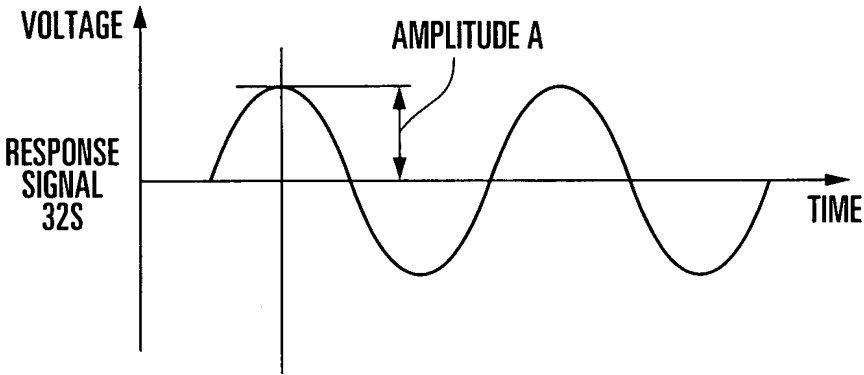
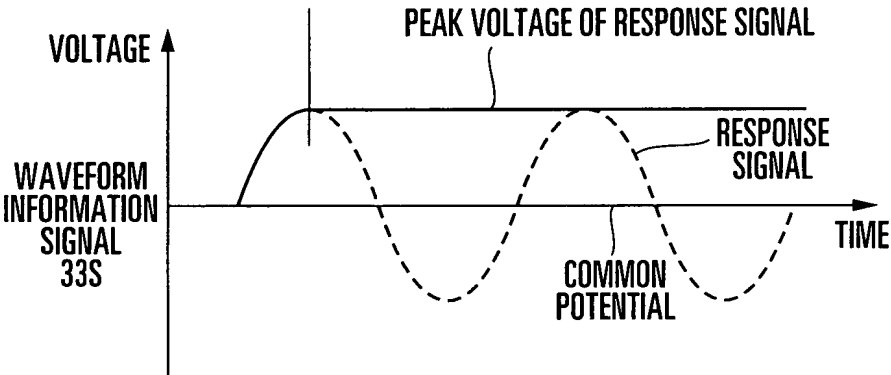


FIG.18B



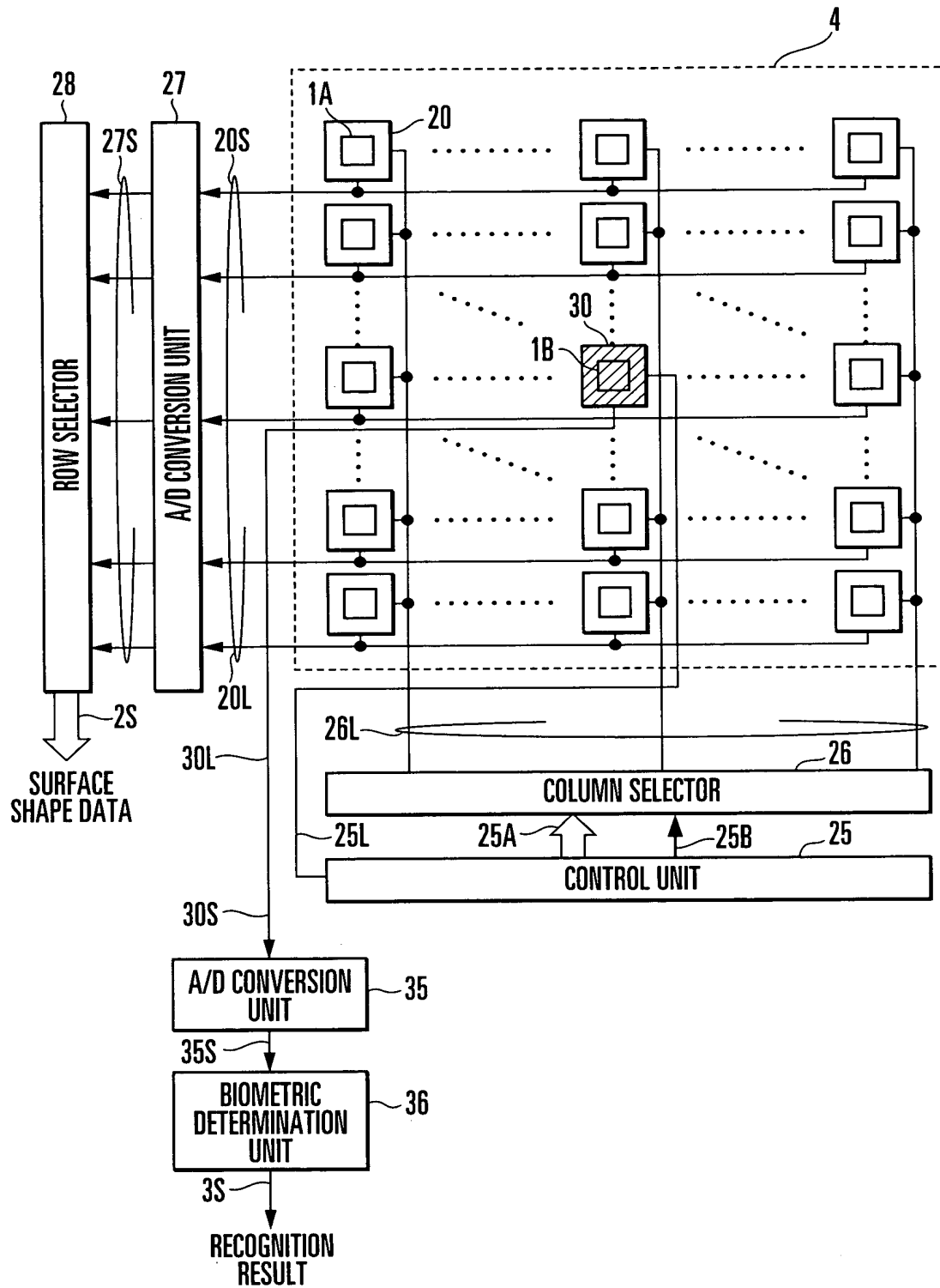


FIG. 19

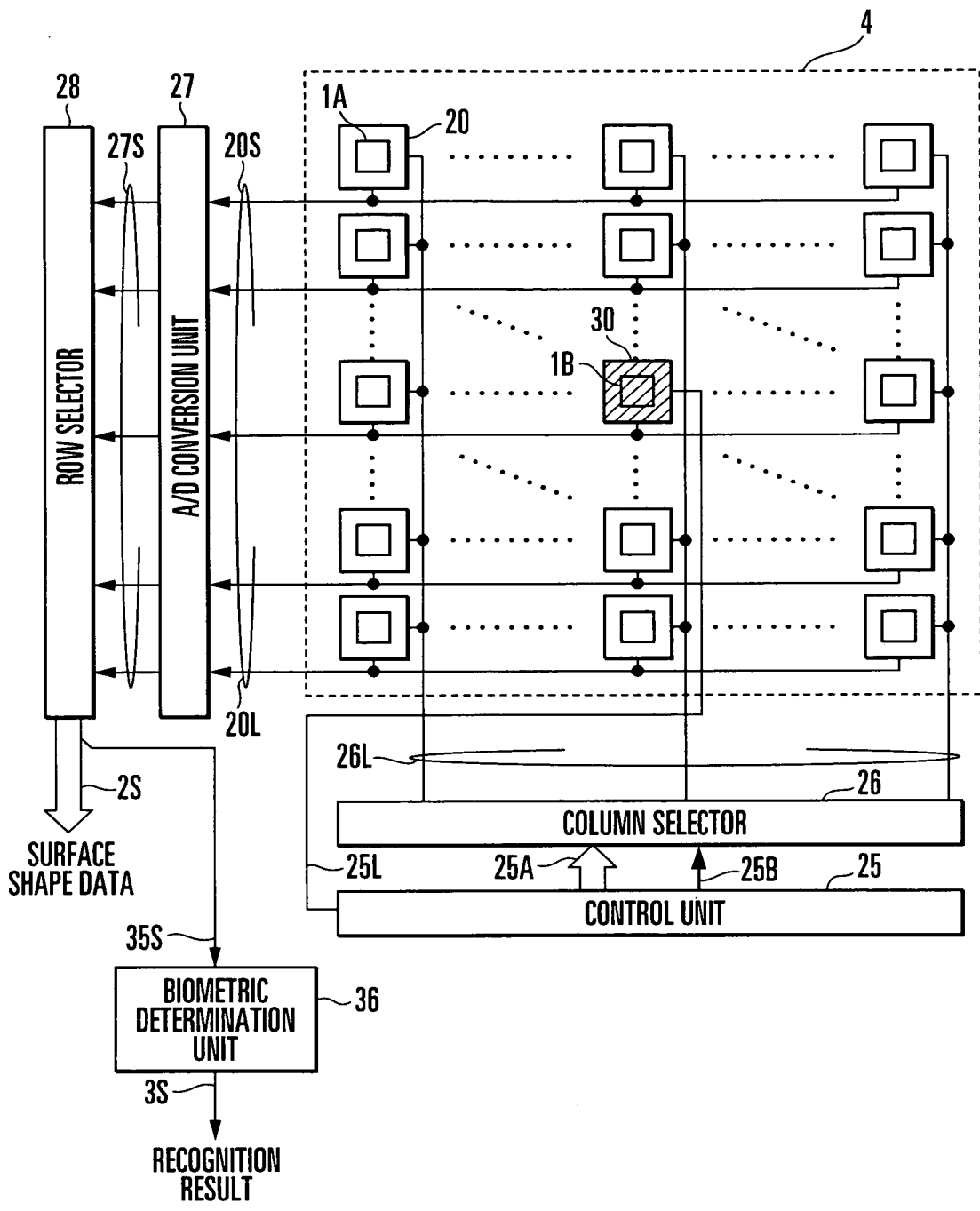


FIG. 20

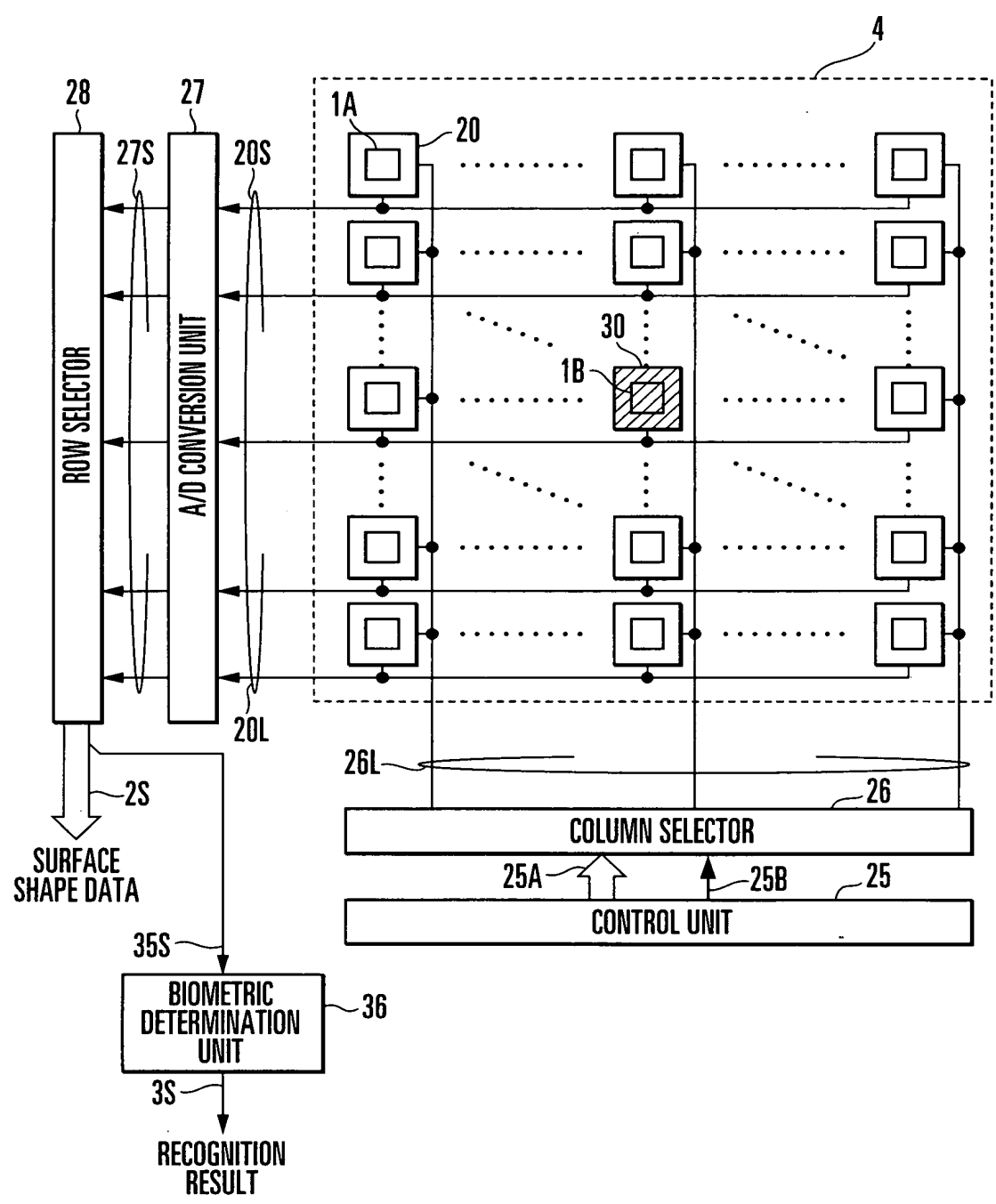


FIG. 21

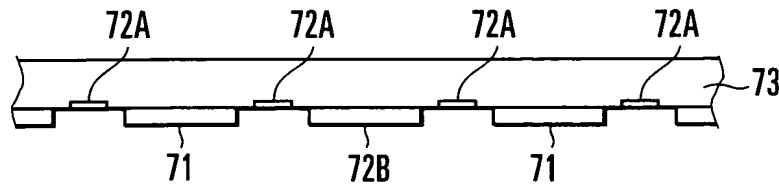


FIG. 22A

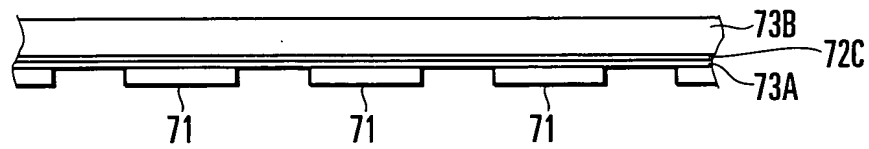


FIG. 22B

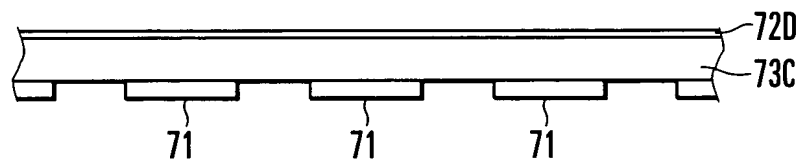


FIG. 22C

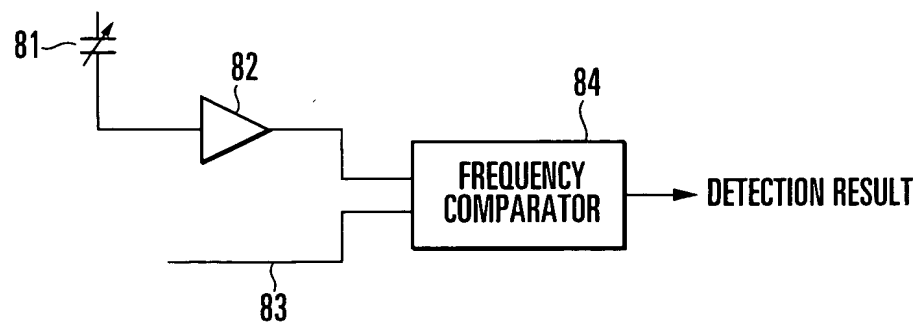


FIG. 23

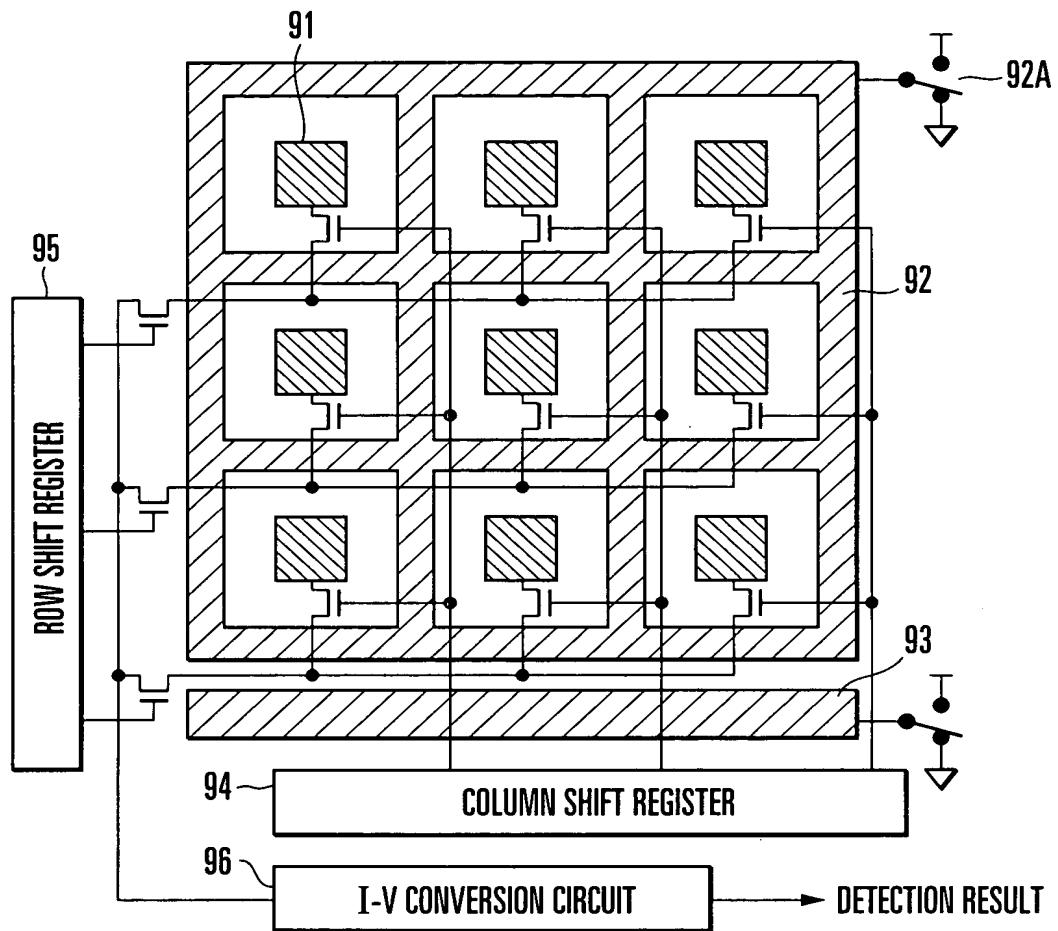


FIG. 24